This recycle mark indicates that the packaging conforms to the environmental protection legislation in Germany.

Esta marca de reciclaje indica que el empaquetado se ajusta a la legislación de protección ambiental en Alemania.

CASIO

CASIO COMPUTER CO.,LTD.
6-1, Nishi-Shinjuku 2-chome
Shinjuku-ku, Tokyo 163-02, Japan

P
MA9703-A (英) (西) Printed in U.S.A.
CTK401ES-1

CTK-401

USER'S GUIDE
GUÍA DEL USUARIO

P
(英) (西)
CTK401ES-1

CASIO

Welcome...

To the happy family of satisfied CASIO electronic musical instrument owners! To get the most out of the many features and functions of the keyboard, be sure to carefully read this manual and keep it on hand for future reference.

Important!

When using batteries, be sure to replace them or shift to one of the alternate power sources whenever you notice any of the following symptoms.

- Dim power supply indicator
- Dim, difficult to read display
- Abnormally low speaker/headphone volume
- Distortion of sound output
- Occasional interruption of sound when playing at high volumes
- Sudden power failure when playing at high volumes
- Dimming of the display playing at high volume
- Abnormal rhythm pattern and Song Bank tune play

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A (not applicable to other areas).

NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE

CASIO ELECTRONICS CO., LTD.
Unit 6, 1000
North Circular Road
London NW2 7JD, U.K.

This mark is valid in the EU countries only.
Please keep all information for future reference.

Volume
- Very high volume levels can damage hearing. Avoid using the instrument at very high volume settings for long periods. Consult with a physician immediately if you experience impaired hearing or ringing in the ears.

Liquid Crystal Display (LCD) Precautions
- Avoid subjecting the keyboard's LCD to strong impact, which can crack or break the LCD's glass creating the danger of personal injury.
- Should the LCD glass ever crack or break, do not allow the liquid inside the LCD to come into contact with your skin, which can cause inflammation and reddening.
  *Should the LCD liquid get into your mouth, immediately wash out your mouth with water and then consult a physician.
  *Should the LCD liquid get in your eyes or on your skin, immediately flush with water for at least 15 minutes and then consult a physician.

Do not get onto the instrument or stand.*
- Do not crawl on top of the instrument or its optional stand. Particular caution is required in homes having small children. This may cause the instrument or stand to tip over and break resulting in injury.

Optional Stand*
- Carefully assemble the stand following the assembly instructions that come with it. Securely tighten all bolts, nuts, and fasteners, and make sure that you mount the instrument correctly onto the stand. Incorrectly or insufficiently tightening screws, or incorrectly mounting the instrument onto the stand can cause the stand to tip over or the instrument to fall off the stand, possibly leading to injury.

*The stand is available as an option.

Care of your keyboard

Avoid heat, humidity or direct sunlight.

Do not overexpose the instrument to direct sunlight, or place it near an air conditioner, or in any extremely hot place.

Do not use near a TV or radio.

This instrument can cause video or audio interference with TV and radio reception. If this happens, move the instrument away from the TV or radio.

Do not use lacquer, thinner or similar chemicals for cleaning.

Clean the keyboard with a soft cloth dampened in a weak solution of water and a neutral detergent. Soak the cloth in the solution and squeeze until it is almost dry.

Avoid use in areas subjected to temperature extremes.

Extreme heat can cause figures on the LCD screen to become dim and difficult to read. This condition should correct itself when the keyboard is brought back to normal temperature.

NOTE

You may notice lines in the finish of the case of this keyboard. These lines are a result of the molding process used to shape the plastic of the case. They are not cracks or breaks in the plastic, and are no cause for concern.

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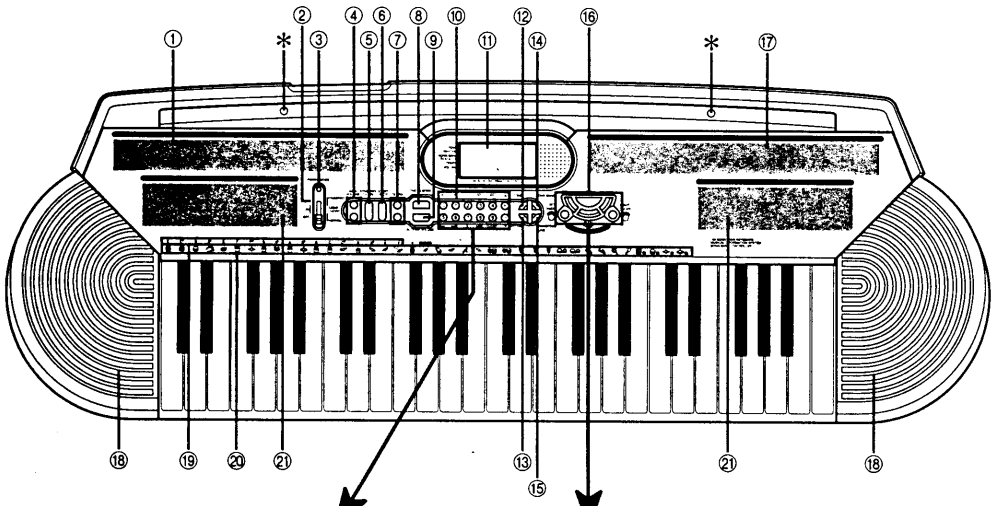
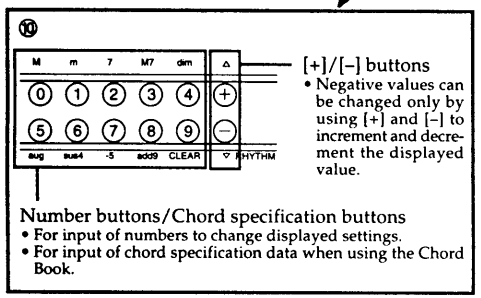
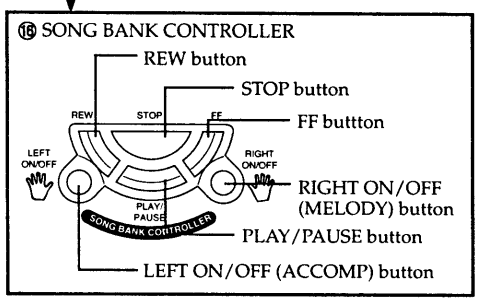
General Guide




⑩
M m 7 M7 dim
0 1 2 3 4
5 6 7 8 9
aug sus4 -5 add9 CLEAR
RHYTHM
[+]/[–] buttons
• Negative values can be changed only by using [+] and [–] to increment and decrement the displayed value.
Number buttons/Chord specification buttons
• For input of numbers to change displayed settings.
• For input of chord specification data when using the Chord Book.



① Rhythm list
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③ Power indicator
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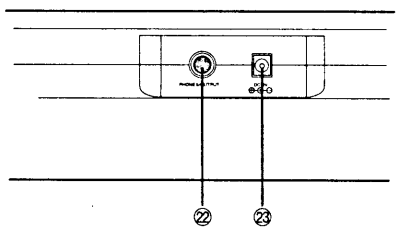
⑭ SONG BANK button
⑮ TRANSPOSE/TUNE button
⑯ SONG BANK CONTROLLER
⑰ Tone list
⑱ Speaker
⑲ Chord name
⑳ Percussion instrument list
㉑ Song bank list

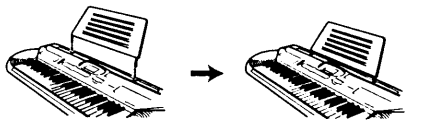
Rear Panel



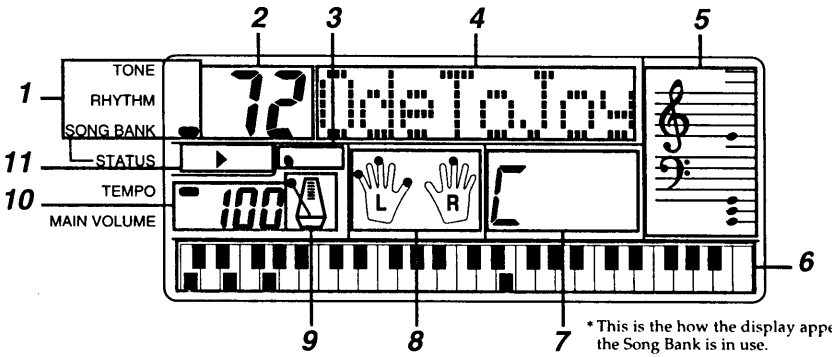
㉒ PHONES/OUTPUT jack
㉓ DC 9V jack

***Attachment of Score Stand**

Insert both ends of the music stand provided with the CTK-401 into the two holes on the top surface.



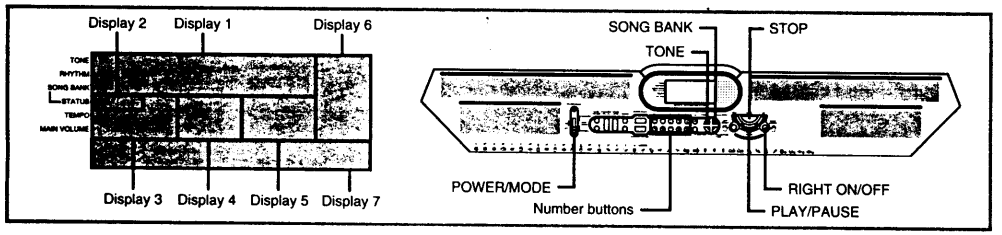
Using the Display



* This is the how the display appears while the Song Bank is in use.

1. An indicator appears next to the type of setting you are currently performing (TONE, RHYTHM, SONG BANK).
2. Tone number, rhythm number, song number
3. Rhythm, auto-accompaniment, Song Bank tune beats
4. Tone name, rhythm name, song name, mode name
5. Uses musical staff notation to show notes and chords played on the keyboard or played during Song Bank tune playback
6. Uses a graphic keyboard to show notes and chords played on the keyboard or played during Song Bank tune playback
7. Auto-accompaniment, Song Bank, chord book chord names
8. Dots indicate fingerings during Song Bank playback. "L" and "R" indicate left-hand and right-hand parts.
9. Rhythm, auto-accompaniment, Song Bank tune tempo
10. Rhythm, auto-accompaniment, Song Bank tune tempo; volume setting
11. Song Bank controller indicators

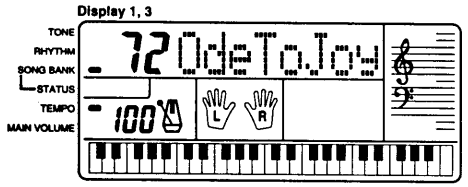
Song Bank Quick Reference



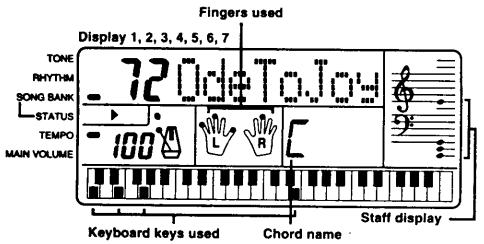
A selection of 100 Song Bank tunes come built-in for your listening pleasure or play along fun. A simple operation cuts out the melody part or accompaniment part of the tune, allowing you to play along on the keyboard. See "Using the Song Bank" on page E-16 for details on playing along with Song Bank tunes.

To play back a Song Bank tune

1. Set the POWER/MODE switch to NORMAL.
2. Press the SONG BANK button to enter the Song Bank Mode.
3. Use the Song Bank list to find the tune you want to play back, and then use the number buttons to input the tune's two-digit number.
   Example: To select "72 ODE TO JOY", input 7 and then 2.

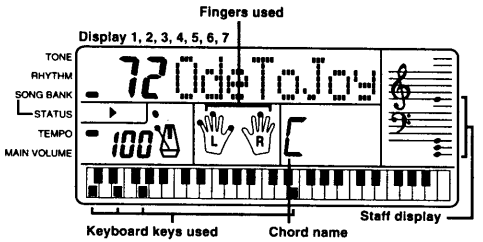


4. Press the PLAY/PAUSE button to start play of the tune.
   - The tune plays in an endless loop, re-starting after it reaches the end.
   - The display shows the keyboard keys (on the graphic keyboard), fingerings (with the fingering indicators), musical notes (on the staff), and chord names.

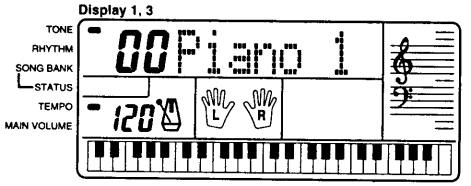


5. Press the RIGHT ON/OFF button to turn off the right-hand melody part and try playing along on the keyboard.
   - The display's graphic keyboard and fingering indicators show you the melody notes to play.

6. Press the RIGHT ON/OFF button again to turn the melody part back on.



7. Press the STOP button to stop playback of the Song Bank tune.
8. Press the TONE button to exit the Song Bank Mode and return to the tone and rhythm selection screen.

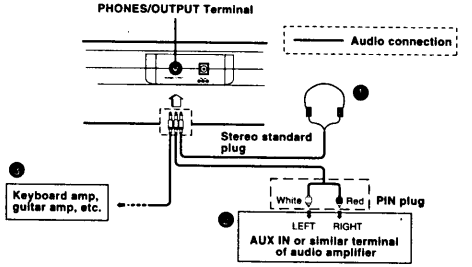


Connections

Phones/Output Terminal

Before connecting phones or other external equipment, be sure to first turn down the volume settings of the keyboard and the connected equipment. You can then adjust volume to the desired level after connections are complete.

[Rear Panel]



Connecting Phones (Figure ●)

Connecting phones cuts off output from the keyboard's built-in speakers, so you can play even late at night without disturbing anyone.

Audio Equipment (Figure ●)

Connect the keyboard to a audio equipment using a commercially available connecting cord with a standard plug on one end and two PIN plugs on the other end. Note that the standard plug you connect to the keyboard must be a stereo plug, otherwise you will be able to output only one of stereo channels. In this configuration, you normally set the input selector of the audio equipment to the terminal (usually marked AUX IN or something similar) where the cord from the keyboard is connected. See the user documentation that comes with your audio equipment for full details.

Musical Instrument Amplifier (Figure ●)

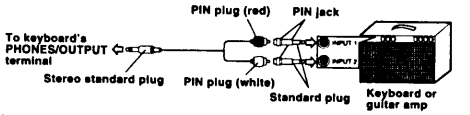
Use a commercially available connecting cord to connect the keyboard to a musical instrument amplifier.

NOTE

Be sure to use a connecting cord that has a stereo standard plug on the end you connect to the keyboard, and a connector that provides dual channel (left and right) input to the amplifier to which you are connecting. The wrong type of connector at either end can cause one of the stereo channels to be lost.

When connected to a musical instrument amplifier, set the volume of the keyboard to a relatively low level and make output volume adjustments using the amplifier's controls.

[Connection Example]



Accessories and Options

Use only the accessories and options specified for this keyboard. Use of non-authorized items creates the danger of fire, electrical shock, and personal injury.

Power Supply

This keyboard can be powered by current from a standard household wall outlet (using the specified AC adaptor) or by batteries. Always make sure you turn the keyboard off whenever you are not using it.

Using batteries

Always make sure you turn off the keyboard before loading or replacing batteries.

To load batteries

1. Remove the battery compartment cover.
2. Load six AA-size batteries into the battery compartment.
   - Make sure that the positive (+) and negative (–) ends are facing correctly.

3. Insert the tabs on the battery compartment cover into the holes provided and close the cover.

The keyboard may not function correctly if you load or replace batteries with power turned on. If this happens, turning the keyboard off and then back on again should return functions back to normal.

Important Battery Information

■ The following shows the approximate battery life provided by different battery types.
- Standard battery life: Approximately 2 hours (SUM-3/R6P)
  Approximately 6 hours (AM3/LR6)

Both of the above values are standard battery life at normal temperature, with the keyboard volume at a medium setting. Temperature extremes or playing at very loud volume settings can shorten battery life.

■ Any of the following symptoms indicate low battery power. Replace batteries as soon as possible whenever any of the following occurs.
- Dim power supply indicator
- Dim, difficult to read display
- Abnormally low speaker/headphone volume
- Distortion of sound output
- Occasional interruption of sound when playing at high volumes
- Sudden power failure when playing at high volumes
- Dimming of the display playing at high volume
- Abnormal rhythm or Song Bank tune play

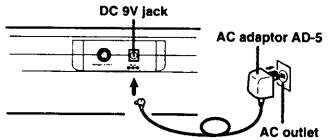
IMPORTANT!

Improper handling of batteries can cause them to burst and leak, which creates the danger of personal injury or damage due to contact with battery acid. Be sure to note the following important precautions.
- Always make sure that the positive (+) and negative (–) poles are facing correctly as indicated inside the battery compartment.
- To avoid damage caused by leaking batteries, be sure to remove batteries from the keyboard whenever you leave it unattended for long periods (such as when leaving on a trip).
- Never mix batteries of different types.
- Never mix old batteries with new ones.
- Never discard batteries by incinerating them, do not allow their poles to be shorted (connected to each other), never take batteries apart, and do not expose batteries to direct heat.
- Replace batteries as soon as possible after any sign they are getting weak.
- Never attempt to recharge batteries.

Using the AC Adaptor

Make sure that you use only the AC adaptor specified for this keyboard.

Specified AC Adaptor: AD-5



Also note the following important warnings and precautions when using the AC adaptor.

WARNING!
- Take care to avoid any damage to or breakage of the power cord. Never place any heavy objects on the power cord or expose it to direct heat. Doing so creates the danger of power cord damage, fire, and electrical shock.
- Use only the specified AC adaptor. Use of another type of adaptor creates the danger of fire and electrical shock.

CAUTION!
- For safety sake, be sure to unplug the AC adaptor from the wall outlet whenever leaving the keyboard unattended for a long time (such as when leaving on a trip).
- Always turn off the keyboard and unplug the AC adaptor from the wall outlet when you are not using the keyboard.

IMPORTANT!
- Make sure that the keyboard is turned off before connecting or disconnecting the AC adaptor.
- Using the AC adaptor for a long time can cause it to become warm to the touch. This is normal and does not indicate malfunction.

Auto Power Off

When you are using battery power, keyboard power turns off automatically whenever you leave it on without performing any operation for about 6 minutes. When this happens, use the POWER/MODE switch to turn power back on.

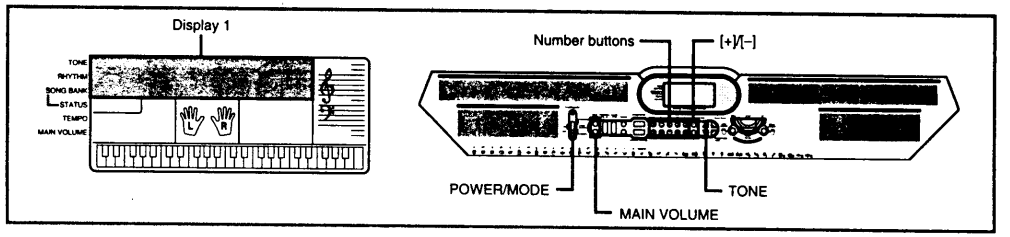
NOTE

Auto Power Off is disabled (it does not function) when you are using the AC adaptor to power the keyboard.

To disable Auto Power Off

Hold down the TONE button while turning on the keyboard to disable Auto Power Off.
- When Auto Power Off is disabled, the keyboard does not turn off automatically no matter how long it is left with no operation being performed.

Basic Operations



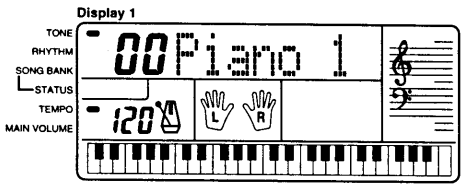
This section provides information on performing basic keyboard operations.

To play the keyboard

1. Set the POWER/MODE switch to NORMAL.
2. Use the MAIN VOLUME buttons to lower the keyboard volume.
   - It's always a good idea to set the keyboard volume at a relatively low level before playing.
   - Pressing [▲] or [▼] causes the curent volume setting to appear on the display. Press [▲] or [▼] again to change the setting.
3. Play something on the keyboard.

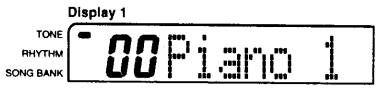
Selecting a Tone

This keyboard comes with 100 built-in tones. Use the following procedure to select the tone you want to use.

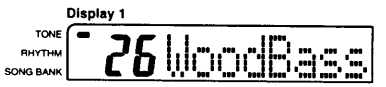


To select a tone

1. Find the tone you want to use in the keyboard's tone list and note its tone number.
2. Press the TONE button.



3. Use the number buttons to input the two digit tone number for the tone you want to select.
   Example: To select "26 WOOD BASS", input 2 and then 6 .



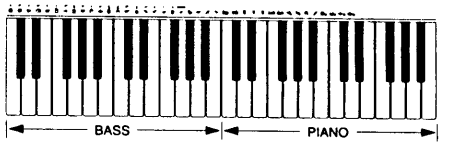
- Now notes played on the keyboard will be played using an acoustical wood bass sound.

NOTES
- Always input both digits for the tone number, including a leading zero (if any). If you input one digit and stop, the display will automatically clear your input after a few seconds.
- You can also increment the displayed tone number by pressing [+] and decrement it by pressing [–].
- The tone named "99 PERCUSSION" assigns various percussion musical instruments to keys on the keyboard. (page A-2)

Keyboard split tones

Some of the preset tones split the keyboard and assign two or more sounds. With such a preset tone, the sound produced depends on what position of the keyboard you play. For example, BASS/PIANO (tone 90) puts BASS on the left and PIANO on the right of the keyboard.

Example: BASS/PIANO (tone 90)



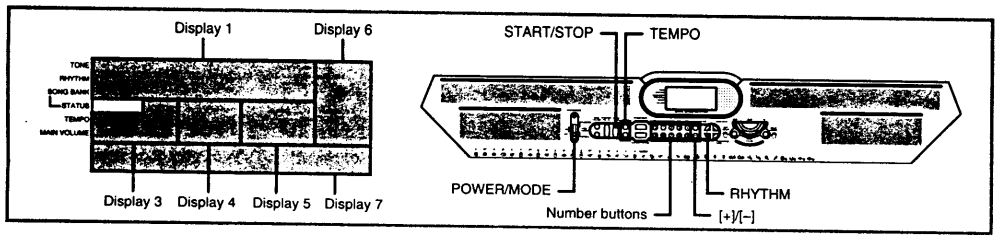
Polyphony

The term polyphony refers to the maximum number of notes you can play at the same time. The keyboard has 12-note polyphony, which includes the notes you play as well as the rhythms and auto-accompaniment patterns that are played by the keyboard. This means that when a rhythm or auto-accompaniment pattern is being played by the keyboard, the number of notes (polyphony) available for keyboard play is reduced. Also note that some of the tones offer only 6-note polyphony.
- When rhythm or auto accompaniment is playing, the number of sounds simultaneously played is reduced.

Digital Sampling

A number of the tones that are available with this keyboard have been recorded and processed using a technique called digital sampling. To ensure a high level of tonal quality, samples are taken in the low, mid, and high ranges and then combined to provide you with sounds that are amazingly close to the originals. You may notice very slight differences in volume or sound quality for some tones when you play them at different positions on the keyboard. This is an unavoidable result of multiple sampling, and it is not a sign of malfunction.

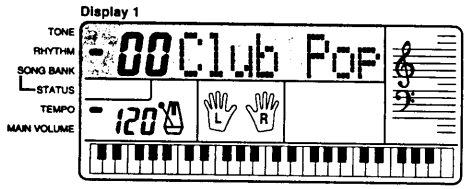
Auto Accompaniment



This keyboard automatically plays bass and chord parts in accordance with the chords you finger. The bass and chord parts are played using sounds and tones that are automatically selected to select the rhythm you are using. All of this means that you get full, realistic accompaniments for the melody notes you play with your right hand, creating the mood of an one-person ensemble.

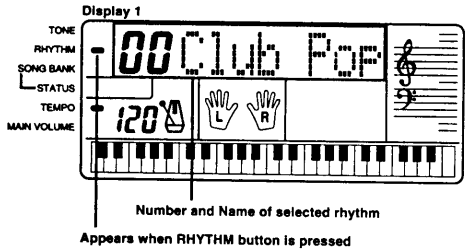
Selecting a Rhythm

This keyboard provides you with 100 exciting rhythms that you can select using the following procedure.

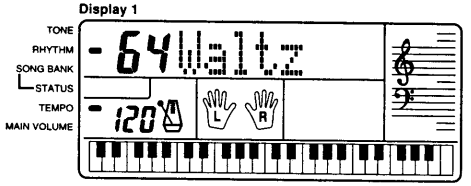


To select a rhythm

1. Find the rhythm you want to use in the keyboard's rhythm list and note its rhythm number.
2. Press the RHYTHM button.



3. Use the number buttons to input the two digit rhythm number for the rhythm you want to select.
   Example: To select "64 WALTZ", input 6 and then 4.



NOTES

- "00 CLUB POP" is the initial default rhythm setting whenever you turn on keyboard power.
- You can also increment the displayed rhythm number by pressing [+] and decrement it by pressing [–].

Playing a Rhythm

Use the following procedure to start and stop rhythm play.

To play a rhythm

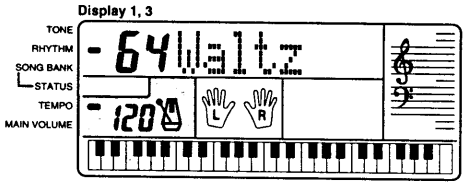
1. Set the POWER/MODE switch to NORMAL.
2. Press the START/STOP button to start play of the currently selected rhythm.
3. To stop rhythm play, press the START/STOP button again.

NOTE

All of the keyboard keys are melody keys while the POWER/MODE switch is set to NORMAL.

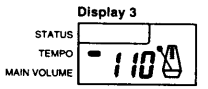
Adjusting the Tempo

You can adjust the tempo of rhythm play within a range of 20 to 255 beats per minute. The tempo setting is applied to Auto Accompaniment chord play, and Song Bank operations.



To adjust the tempo

1. Use the TEMPO buttons (▲, ▼) to adjust the tempo.
   ▲ : Increments displayed value (increases tempo)
   ▼ : Decrements displayed value (decreases tempo)
   Example: Hold down the ▼ button until the tempo value 110 is on the display.

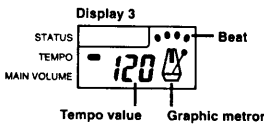


NOTE

Pressing both TEMPO buttons (▲ and ▼) at the same time resets the tempo to the default value of the currently selected rhythm.

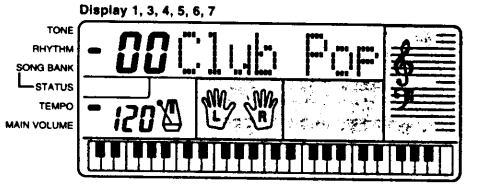
About the Graphic Metronome

The graphic metronome appears on the display along with the tempo value and beat of a rhythm or built-in tune. The graphic metronome helps you keep in time as you play along with a rhythm or built-in tune.



Using Auto Accompaniment

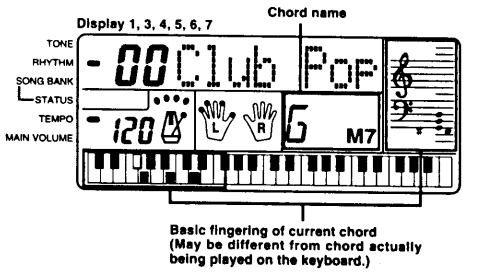
The following procedure describes how to use the keyboard's Auto Accompaniment feature. Before starting, you should first select the rhythm you want to use and set the tempo of the rhythm to the value you want.



To use Auto Accompaniment

1. Set the POWER/MODE switch to CASIO CHORD or FINGERED.
2. Press the START/STOP button to start play of the currently selected rhythm.
3. Play a chord.
   • The actual procedure you should use to play a chord depends on the current POWER/MODE switch position. Refer to the following pages for details on chord play.

CASIO CHORD ..... Page E-14
FINGERED ..... Page E-14

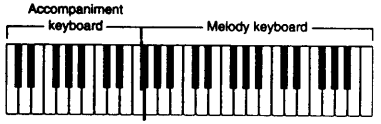


4. To stop Auto Accompaniment play, press the START/STOP button again.

CASIO CHORD

This method of chord play makes it possible for anyone to easily play chords, regardless of previous musical knowledge and experience. The following describes the CASIO CHORD "Accompaniment keyboard" and "Melody keyboard", and tells you how to play CASIO CHORDs.

CASIO CHORD Accompaniment Keyboard and Melody Keyboard



NOTE

The accompaniment keyboard can be used for playing chords only. No sound will be produced if you try playing single melody notes on the accompaniment keyboard.

Chord Types

CASIO CHORD accompaniment lets you play four types of chords with minimal fingering.

Chord Types	Example
Major chords Major chord names are marked above the keys of the accompaniment keyboard. Note that the chord produced when you press an accompaniment keyboard does not change octave, regardless of which key you use to play it.	C Major (C)
Minor chords (m) To play a minor chord, keep the major chord key depressed and press any other accompaniment keyboard key located to the right of the major chord key.	C minor (Cm)
Seventh chords (7) To play a seventh chord, keep the major chord key depressed and press any other two accompaniment keyboard keys located to the right of the major chord key.	C seventh (C7)
Minor seventh chords (m7) To play a minor seventh chord, keep the major chord key depressed and press any other three accompaniment keyboard keys located to the right of the major chord key.	C minor seventh (Cm7)

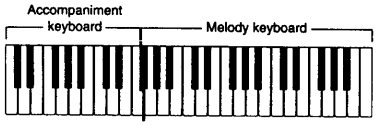
NOTE

It makes no difference whether you press black or white keys to the right of a major chord key when playing minor and seventh chords.

FINGERED

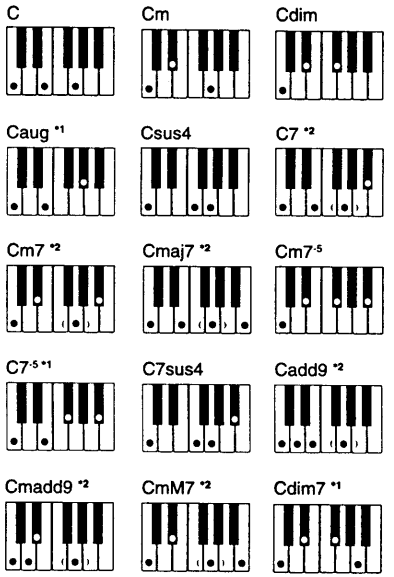
FINGERED provides you with a total of 15 different chord types. The following describes the FINGERED "Accompaniment keyboard" and "Melody keyboard", and tells you how to play a C-root chord using FINGERED.

FINGERED Accompaniment Keyboard and Melody Keyboard



NOTE

The accompaniment keyboard can be used for playing chords only. No sound will be produced if you try playing single melody notes on the accompaniment keyboard.

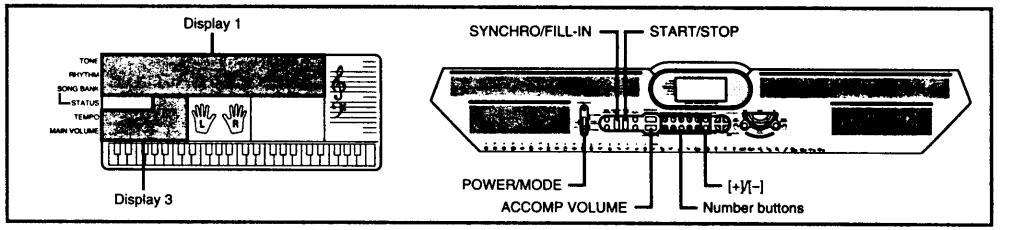


See the FINGERED Chord Chart on page A-1 for details on playing chords with other roots.

*1: Inverted fingerings cannot be used. The lowest note is the root.
*2: The same chord can be played without pressing the 5th G.

NOTES

- Except for the chords specified in note*1 above, inverted fingerings (i.e. playing E-G-C or G-C-E instead of C-E-G) will produce the same chords as the standard fingering.
- Except for the exception specified in note*2 above, all of the keys that make up a chord must be pressed. Failure to press even a single key will not play the desired FINGERED chord.



Using a Fill-in Pattern

Fill-in patterns let you momentarily change the rhythm pattern to add some interesting variation to your performances.

The following procedure describes how to use the Fill-in feature.

To insert a fill-in

1. Press the START/STOP button to start rhythm play.
2. Press the SYNCHRO/FILL-IN button to insert a fill-in pattern for the rhythm you are using.

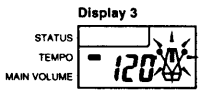
Synchro Starting Accompaniment with Rhythm Play

You can set up the keyboard to start rhythm play at the same time you play the accompaniment on the keyboard.

The following procedure describes how to use synchro start. Before starting, you should first select the rhythm you want to use, set the tempo, and use the POWER/MODE switch to select the chord play method you want to use (CASIO CHORD, FINGERED).

To use synchro start

1. Press the SYNCHRO/FILL-IN button to put the keyboard into synchro start standby.



2. Play a chord on the accompaniment keyboard and the rhythm pattern starts to play automatically.

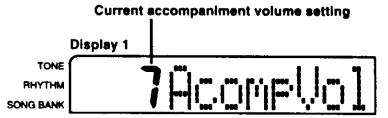
NOTES

- If the POWER/MODE switch is set to NORMAL, only the rhythm plays (without a chord) when you play on the accompaniment keyboard.
- To cancel synchro start standby, press the SYNCHRO/FILL-IN button one more time.

Adjusting the Accompaniment Volume

You can adjust the volume of the accompaniment parts as a value in the range of 0 (minimum) to 9.

1. Press the ACCOMP VOLUME button.

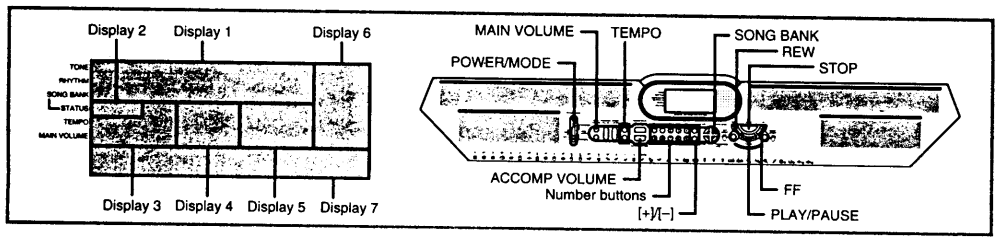


2. Use the number buttons or the (+)/(–) buttons to change the current volume setting value.
Example: 5

NOTES

- The current accompaniment volume value that appears in Step 1 automatically clears from the display if you do not input anything within about five seconds.
- Pressing [+] and [–] buttons at the same time automatically sets an accompaniment volume of 7.
- You can make independent accompaniment volume settings for auto-accompaniment and Song Bank tune accompaniment parts.

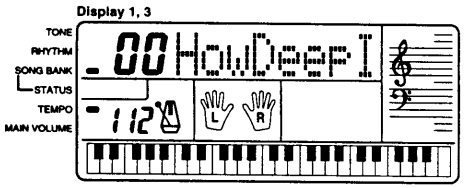
Using the Song Bank



A selection of 100 Song Bank tunes come built-in for your listening enjoyment of play along fun. You can turn off the left-hand or right-hand part to practice with the remaining part, and the display even shows you what keys to press and which fingers you should use.

To play back a Song Bank tune

1. Set the POWER/MODE switch to NORMAL, FINGERED, or CASIO CHORD.
2. Adjust the main volume and accomp volume.
3. Press the SONG BANK button to enter the Song Bank Mode.



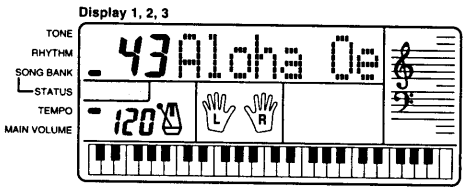
4. Use the Song Bank list to find the tune you want to play back, and then use the number buttons to input the tune's two-digit number.
Example: To select "43 ALOHA OE", input 4 and then 3.

NOTES

- "00 HOW DEEP IS YOUR LOVE" is the initial default Song Bank tune setting whenever you turn on keyboard power.
- You can also increment the displayed tune number by pressing [+] and decrement is by pressing [−].
- Before advancing to the next step, which actually starts playback, you can adjust the tempo (page E-13), select a tone (page E-11) for the melody part, or turn off the left-hand or right-hand part (page E-18).

5. Press the PLAY/PAUSE button to start play of the tune.

6. Press the STOP button to stop playback of the Song Bank tune.



To pause Song Bank tune play

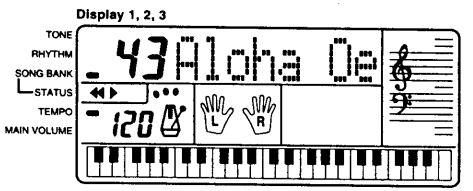
1. While a Song Bank tune is playing, press the PLAY/PAUSE button to pause it.

- The indicator " II " appears on the display while a tune play is paused.

2. To resume play, press PLAY/PAUSE again.

To fast reverse during playback

1. While playback is in progress, hold down the REW button.
- There is no playback while the fast reverse operation is being performed.

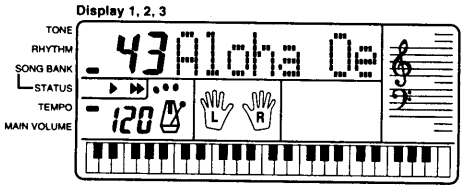


- The indicator "◀◀" appears on the display while a fast reverse operation is in progress.
- Beeps sound during fast reverse to give you an idea of where you are located in the tune.
  1 beep: indicates a change to anther measure.
  2 beeps: indicates the beginning of the tune.

2. To resume normal playback, release the REW button.

To fast forward during playback

1. While playback is in progress, hold down the FF button.
- There is no playback while the fast forward operation is being performed.



- The indicator " ▶▶ " appears on the display while a fast forward operation is in progress.
- Beeps sound during fast forward to give you an idea of where you are located in the tune.
  1 beep: indicates a change to anther measure.
  3 beeps: indicates the beginning of the tune.

2. To resume normal playback, release the FF button.

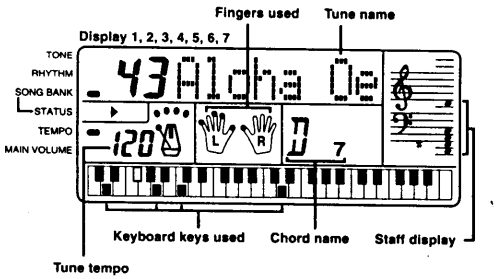
NOTES

- Each time you select a new Song Bank tune, the tone, tempo, and rhythm that is programmed for the tune are automatically selected. You can change a tune's tone and tempo during playback, but you cannot change the rhythm.
- You can also adjust the accompaniment volume (page E-15) for tunes 00 through 89.

Song Bank Mode Display

In the Song Bank Mode, the display shows a variety of information about the tune being played.

- Playback Display



NOTE

Chord names are not displayed for Songs 90 through 99.

Adjusting the Tempo of a Song Bank Tune

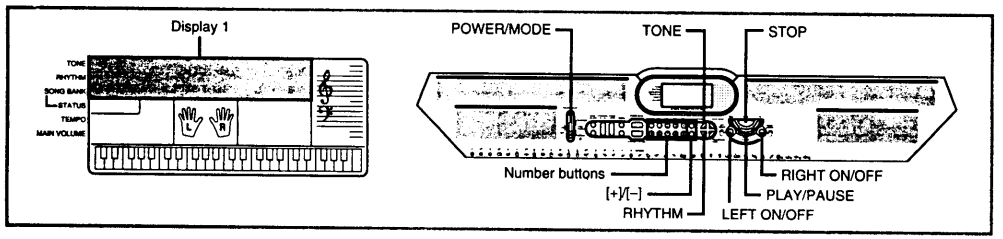
To change the tempo of a Song Bank tune

The tempo can be set within a range of 20 to 255 beats per minute. The tempo setting can be adjusted while the tune is stopped, playing back, or paused.

1. Use the TEMPO buttons (▲/▼) to adjust the tempo.
▲: each press increases the value
▼: each press decreases the value

NOTE

Pressing both the [▲] and [▼] TEMPO buttons at the same time returns the tempo setting to the preset value for the currently selected tune.



To change the tone of a Song Bank tune's melody

You can select any one of the keyboard's 100 tones to be used to play the melody part of a Song Bank tune. The tone setting can be changed while the tune is stopped or playing back.

1. While a song is playing back, press the TONE button.

2. Find the tone you want in the Tone List, and then use the number buttons or the (+) and (–) buttons to specify the tone number.
Example: To select "30 VIOLIN", input 3 and then 0.

NOTES

- Pressing both the [+] and [–] buttons at the same time selects "00 PIANO 1".
- With two-hand tunes (90 to 99), you can select tones for both the left hand part and right hand part.
- To return a Song Bank tune to its original settings, simply select that tune again.

Playing Along with a Song Bank Tune

You can turn off the left-hand part or right-hand part of a Song Bank tune and play along with the remaining part on the keyboard. Of the 100 Song Bank tunes, numbers 00 through 89 feature auto-accompaniment (auto-accompaniment tunes), while 90 through 99 are played using both hands (two-hand tunes).

Tune Numbers	00 to 89	90 to 99
Accompaniment Type	Auto-accompaniment	Piano Solo
Left-hand Part	Auto-accompaniment (percussion, bass, chords)	Left-hand notes
Right-hand Part	Melody	Right-hand notes

Auto-accompaniment Tunes (Tune Numbers 00 to 89)

- Turn off the right-hand part and you can play the melody on the keyboard.
- Turn off the left-hand part and you can play chords to accompany the melody.

Two-hand Tunes (Tune Numbers 90 to 99)

- Turn off a part and you can play it on the keyboard.

To play along with a Song Bank tune

Before pressing the PLAY/PAUSE button to start Song Bank tune play (page E-16), press LEFT ON/OFF to turn off the left-hand part, or RIGHT ON/OFF to turn off the right-hand.

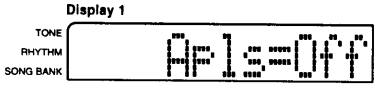
- A part is turned on when its indicator (L or R) is shown on the display inside the graphic hands. A part is turned off when no indicator is shown.

NOTES

- During playback of a two-hand tune (90 to 99), the entire keyboard functions as a melody keyboard, regardless of the POWER/MODE switch setting.
- With two-hand tunes (90 to 99), you cannot turn off both the left-hand and right-hand parts at the same time. Turning off a part causes the other part to turn on automatically.
- The selected Song Bank tune continues to repeat until you stop playback by pressing the STOP button.
- The accompaniment volume setting (page E-15) affects only auto-accompaniment tunes (00 to 89).

Applause Sound

Whenever you turn off the left hand or right hand part of a Song Bank tune and play it back, an applause sound is produced when the tune reaches the end. To turn off the applause sound, press the STOP button and the LEFT ON/OFF or RIGHT ON/OFF button at the same time.

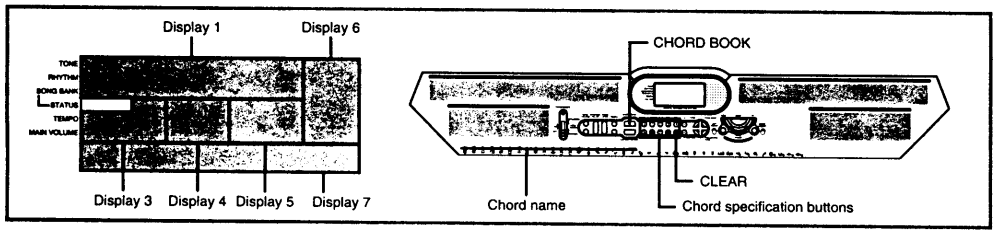


- Pressing the STOP button and the LEFT ON/OFF or RIGHT ON/OFF button at the same time again turns the applause sound back on.

To consecutively play back all Song Bank tones

1. Use the TONE or RHYTHM button to change to any mode other than the Song Bank Mode.
   - Make sure a dot is not on the display next to the SONG BANK indicator.
2. Press the PLAY/PAUSE button to start playback of the Song Bank tunes starting from tune 00.
3. To stop Song Bank tune playback, press the STOP button.
   - Pausing playback automatically cancels consecutive playback of all Song Bank tunes. Re-starting playback causes repeat playback of the current tune only.

Using the Chord Book

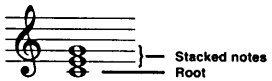


The Chord Book feature of this keyboard makes it possible for you to look up information about chords quickly and easily. Simply input the name of the chord and the the keyboard keys you should press, the fingers you should use, and the notes that make up the chord appear on the display along with the chord name.

What is a chord?

A chord is made up of a root note, upon which is stacked a number of other notes. A variety of different chords can be created by changing the notes stacked onto a root.

<Example: C chord>



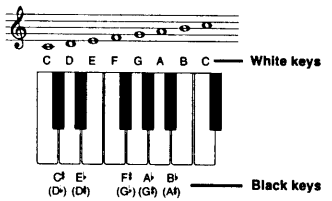
Chord Names

Chords are named using upper-case letters from A through G, which indicate the root note of the chord. If the root note is a sharp or flat, the chord itself is sharp or flat. A chord name may also be followed by a degree number or other symbols that indicate certain characteristics about the chord.

<Examples>

C Root	Sharp F♯ Root	Flat B♭ Root	Minor Am Root	Sharp / Diminished C♯ dim Root
Seventh G7 – Degree Root	Major seventh FM7 – Degree Root		Sus fourth Esus4 Root	

<Note Names>



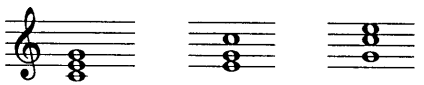
Sharps and flats can be referred to using either of the names shown here. The names in the upper row of this illustration are used by this keyboard, because they are the names that are most commonly used in musical notation.

Inverted Forms

There are a number of different ways to play the same chord. A form that is different from the basic form but still produces the same chord is called an "inverted form."

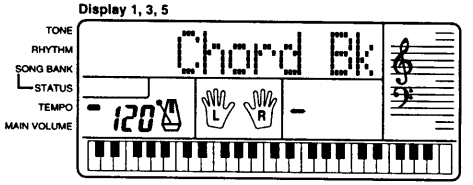
<Example: C chord>

All of the following are C chords.



To look up a chord using the Chord Book

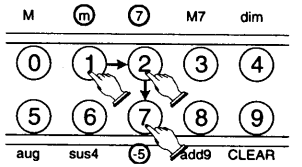
1. Press the CHORD BOOK button.

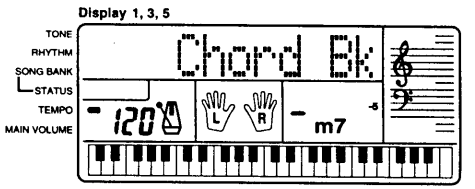


2. Press the CLEAR button.

3. If the chord name you plan to input is a non-major chord, use the chord specification buttons to specify the chord type.
   - Non-major chords include minor, seventh, sustained, etc. chords.
   - See page E-22 for details on the chord specification buttons.
   - Skip step 3 if you want to input a major chord name.

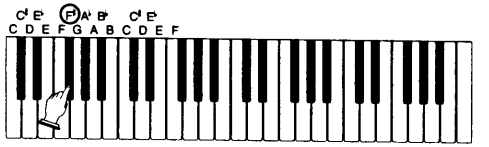
<Example: F♯m7-5>

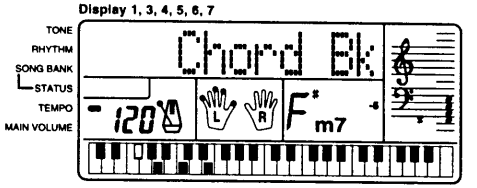




4. Press the accompaniment keyboard key that corresponds to the root note of the chord.
   - A dash appears in place of the chord name if the chord cannot be recognized by the keyboard.
   - To specify F♯, for example, press the F♯ key.
   - The key you press is indicated on the graphic keyboard and the corresponding chord sounds.

<Example: F♯m7-5>

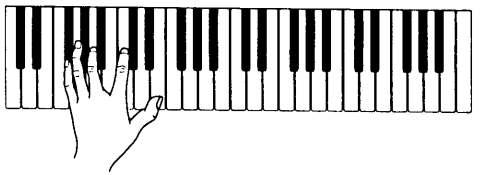




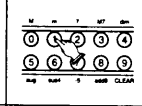
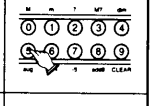
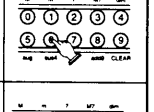
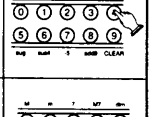
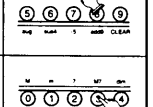
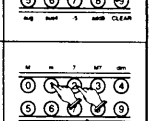
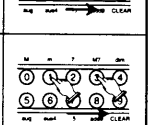
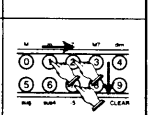
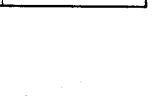
5. Check to make sure that the chord name on the display is the one you want. If it isn't, repeat the above from step 2.

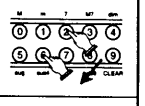
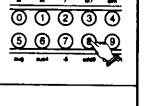
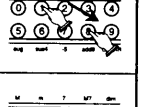
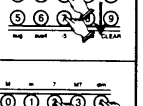
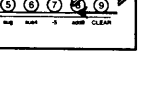
6. If the chord is correct, you can see its fingering on the graphic keyboard. Try playing the chord on the keyboard.

<Example>



Chord Name Modifier Keys

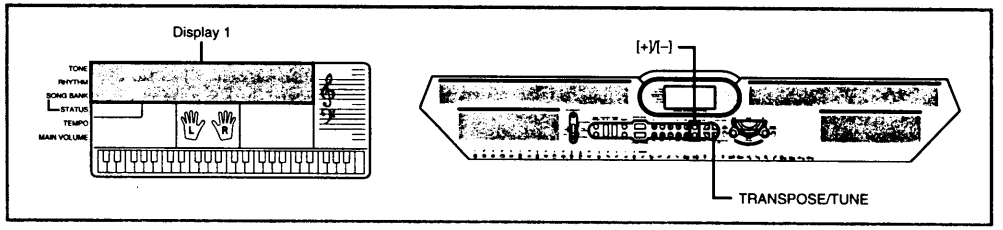
Chord Type	Symbol and Name	Reference	Modifier Key
major	C (C major)		
minor	Cm (C minor)		
aug	Caug (C augmened)	C+5	
sus 4	Csus4 (C sustained fourth)		
dim	Cdim (C diminished)	C°	
7th	C7 (C seventh)		
M7	CM7 (C major seventh)	Cmaj7 CΔ7	
minor 7	Cm7 (C minor seventh)		
minor M7	CmM7 (C minor Major seventh)		
minor7-5	Cm7-5 (C minor seventh flat five)	C°	

Chord Type	Symbol and Name	Reference	Modifier Key
7sus 4	C7sus4 (C seventh sus fourth)		
add 9	Cadd9 (C add ninth)		
m add 9	Cm add9 (C minor add ninth)		
7th-5	C7-5 (C seventh flat five)	C7♭5	
dim7	Cdim7 (C diminished seventh)		

NOTES

- Since the chord fingerings that appear on the display are selected to allow chord play within the accompaniment keyboard, inverted chord forms (page E-20) are often suggested. Inverted chord forms are useful to help you learn how to play chord variations that make it possible to move from one chord to another with minimal hand movement. These forms come in handy when using FINGERED Auto Accompaniment play.
- While a chord name is on the display, you can press keys on the accompaniment keyboard to find out the fingerings of the same chord with a different root.
- Chord fingerings that appear or the display are formed using only the keys within the range of the accompaniment keyboard (left most 18 keys). Chords that cannot be formed using the keys within this range are not displayed.

Keyboard Settings

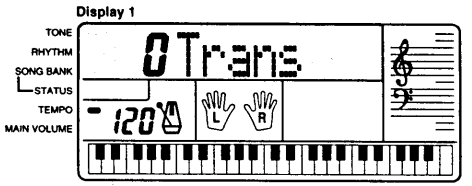


Transposing the Keyboard

Transpose lets you raise and lower the overall key of the keyboard in semitone units. If you want to play an accompaniment for a vocalist who sings in a key that's different from the keyboard, for example, simply use transpose to change the key of the keyboard.

To transpose the keyboard

1. Press the TRANSPOSE/TUNE button until the transpose screen appears on the display.



2. Use (+) and (–) to change the transpose setting of the keyboard.
Example: To transpose the keyboard five semitones upwards.

NOTES

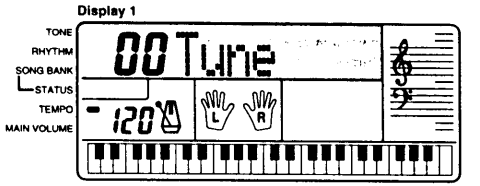
- The keyboard can be transposed within a range of –6 to +5.
- The default transpose setting is "0" when keyboard power is turned on.
- If you leave the transpose screen on the display for about five seconds without doing anything, the screen is automatically cleared.
- The transpose setting also affects Auto Accompaniment.
- Playing back a Song Bank tune automatically returns the transpose setting to its standard default of "0".

Tuning the Keyboard

The tuning feature lets you fine tune the keyboard to match the tuning of another musical instrument.

To tune the keyboard

1. Press the TRANSPOSE/TUNE button twice to display the tuning screen.



2. Use (+) and (–) to change the tuning setting of the keyboard.
Example: To lower the tuning by 20.

NOTES

- The keyboard can be tuned within a range of –50 cents to +50 cents. *100 cents is equivalent to one semitone.
- The default tuning setting is "00" when keyboard power is turned on.
- If you leave the tuning screen on the display for about five seconds without doing anything, the screen is automatically cleared.
- The tuning setting also affects Auto Accompaniment.
- Playing back a Song Bank tune automatically returns the tuning setting to its standard default of "00".

Troubleshooting

Problem	Possible Cause	Action	See page
No keyboard Sound	1. Power supply problem.	1. Correctly attach the AC adaptor, make sure that batteries poles (+/–) are facing correctly, and check to make sure that batteries are not dead.	Page E-10
	2. Power is not turned on.	2. Set the POWER/MODE switch to the NORMAL position.	Page E-11
	3. Volume setting is too low.	3. Use the MAIN VOLUME button to increase volume.	Page E-11
	4. The POWER/MODE switch is in the CASIO CHORD or FINGERED position.	4. Normal play is not possible on the accompaniment keyboard while the POWER/MODE switch is set to CASIO CHORD or FINGERED. Change the POWER/MODE switch setting to NORMAL.	Page E-13
Any of the following symptoms while using battery power. • Dim power supply indicator • Dim, difficult to read display • Abnormally low speaker/headphone volume • Distortion of sound output • Occasional interruption of sound when playing at high volumes • Sudden power failure when playing at high volumes • Dimming of the display playing at high volume • Abnormal rhythm pattern and Song Bank tune play	Low battery power	Replace the batteries with a set of new ones or use the AC adaptor.	Page E-10
Auto Accompaniment does not sound.	Accompaniment volume is set to 0.	Use the ACCOMP VOLUME button to increase the volume.	Page E-15
Missing Song Bank tune.	1. Left-hand or right-hand part is turned off.	1. Check the display to see if the indicator for one of the parts is not displayed. If so, press the part's button (LEFT ON/OFF, RIGHT ON/OFF) to turn it on.	Page E-18
	2. Accompaniment volume is set to 0.	2. Adjust accompaniment volume.	Page E-15

Specifications

Model:	CTK-401
Keyboard:	49 standard-size keys, 4 octaves
Tones:	100
Polyphony:	12 notes maximum (6 for certain tones)
Auto Accompaniment	
Rhythm Patterns:	100
Tempo:	Variable (236 steps, ♩ = 20 to 255)
Chords:	2 fingering methods (CASIO CHORD, FINGERED)
Rhythm Controller:	START/STOP, SYNCHRO/FILL-IN
Accomp Volume:	0 to 9 (10 steps)
Song Bank	
Tunes:	100
Controllers:	PLAY/PAUSE, STOP, REW, FF, LEFT ON/OFF, RIGHT ON/OFF
Musical Dictionary	
Name display:	TONE, RHYTHM, SONG BANK name/number
Tempo:	Tempo value, metronome, synchro standby, beat indicator
Chord:	Chord name, Chord form
Fingering:	Fingering indcators, parts
Song Bank Status:	PLAY, PAUSE, REW, FF, playing
Staff:	Four octaves with sharp and flat indications
Keyboard:	Four octaves
Other Functions	
Transpose:	12 steps (–6 semitones to +5 semitones)
Tuning:	Variable (A4 = approximately 440Hz ±50 cents)
Volume:	0 to 9 (10 steps)
Terminals	
Phones/Output Terminal:	Stereo standard jack Output Impedance: 100Ω Output Voltage: 3.0V (RMS) MAX
Power Supply Terminal:	9V DC
Power Supply	Dual power supply system
Batteries:	Six AA-size batteries
Battery Life:	Approximately 2 hours (SUM-3/R6P)/6 hours (AM3/LR6)
AC Adaptor:	AD-5
Auto Power Off:	Turns power off approximately six minutes after last key operation. Enabled under battery power only, can be disabled manually.
Speaker Output:	2.0W + 2.0W
Power Consumption:	9V ⎓ 7.0W
Dimensions:	98.8 x 33.2 x 12.4 cm (38 15/16 x 13 1/16 x 4 7/8 inch)
Weight:	Approximately 3.5kg (7.7lbs) (without batteries)

Appendix/Apéndice

Fingered Chord Chart

Cuadros de acordes Fingered

This table shows the left-hand fingerings (including inverted forms) for a number of often-used chords. These fingering indications also appear on the keyboard's display.
Chords marked with asterisk (*) cannot be played in the Fingered Mode on this keyboard.

Esta tabla muestra las digitaciones (incluyendo las formas invertidas) para varios de los acordes más a menudo usados. Estas indicaciones de digitación también aparecen sobre la presentación del teclado.
En este teclado, los acordes marcados con asterisco (*) no pueden ejecutarse en el modo de digitación.

: Left hand finger numbers

: Números de los dedos de la mano izquierda

Root \ Chord Type	M	m	7	m7	dim7	M7	m7-5	dim
C	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
C♯ (D♭)	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
D	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
E♭ (D♯)	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
E	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
F	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
F♯ (G♭)	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
G	[5, 3, 1]	[5, 3, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 4, 2, 1]	[5, 3, 2, 1]	[5, 3, 2]
A♭ (G♯)	[5, 3, 1]	[5, 3, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	[5, 3, 2, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	[5, 3, 2]
A	[5, 3, 1]	[5, 3, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	*	[5, 4, 2, 1]	[5, 4, 2, 1]	[5, 3, 2]
B♭ (A♯)	[5, 3, 1]	[5, 3, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	*	[5, 4, 2, 1]	[5, 4, 2, 1]	[5, 3, 2]
B	[5, 2, 1]	[5, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	*	[5, 3, 2, 1]	[5, 4, 2, 1]	[5, 3, 2]

Root \ Chord Type	aug	sus4	7 sus4	m add9	m M7	7-5	add9
C	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
C♯ (D♭)	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
D	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
E♭ (D♯)	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
E	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
F	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
F♯ (G♭)	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
G	[5, 3, 1]	[5, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 4, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]
A♭ (G♯)	[5, 3, 1]	[5, 2, 1]	[5, 4, 2, 1]	[4, 3, 2, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	[4, 3, 2, 1]
A	[5, 3, 1]	[5, 2, 1]	[5, 4, 2, 1]	[4, 3, 2, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	[4, 3, 2, 1]
B♭ (A♯)	*	[5, 2, 1]	[5, 4, 2, 1]	[4, 3, 2, 1]	[5, 4, 2, 1]	[5, 4, 2, 1]	[4, 3, 2, 1]
B	*	[5, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[5, 3, 2, 1]	[4, 3, 2, 1]	[5, 3, 2, 1]

Percussion Assignment List

Lista de sonidos de percusión

- PERCUSSION (tone 99) assigns 39 percussion sound to the keyboard as illustrated below. The sound assigned to each key are indicated above the keyboard.

- PERCUSSION (sonido 99) asigna 39 sonidos de percusión al teclado como se ilustra debajo. Los sonidos asignados a cada tecla se indican sobre el teclado.

BASS DRUM	OPEN HI-HAT	COWBELL	LOW TIMBALE
SIDE STICK	LOW-MID TOM	CRASH CYMBAL 2	HIGH AGOGO
ACOUSTIC SNARE	HIGH-MID TOM	CLAVES	LOW AGOGO
HAND CLAP	CRASH CYMBAL 1	RIDE CYMBAL 2	CABASA
ELECTRIC SNARE	HIGH TOM	HIGH BONGO	MARACAS
LOW FLOOR TOM	RIDE CYMBAL 1	LOW BONGO	VOICE BASS DRUM
CLOSED HI-HAT	CHINESE CYMBAL	MUTE HIGH CONGA	VOICE SNARE
HIGH FLOOR TOM	RIDE BELL	OPEN HIGH CONGA	VOICE CLOSED HI-HAT
PEDAL HI-HAT	TAMBOURINE	LOW CONGA	VOICE OPEN HI-HAT
LOW TOM	SPLASH CYMBAL	HIGH TIMBALE	